REMARKS

This Amendment and Response to Final Office Action is being submitted in response to the final Office Action mailed January 24, 2006. Claims 1-4 are pending in the Application. Claims 1-4 stand rejected.

Specifically, Claims 1-4 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Applicants' admitted prior art in view of Brewer et al. (U.S. Patent No. 6,226,269).

Additionally, Claims 1-4 stand rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which Applicants regard as the invention.

In response to these rejections, the Claims have been amended herein, without prejudice or disclaimer to continued examination on the merits. These amendments are fully supported in the Specification, Drawings, and Claims of the Application and no new matter has been added. Based upon the amendments, reconsideration of the Application, without further search, is respectfully requested in view of the following remarks.

Rejection of Claims 1-4 Under 35 U.S.C. 103(a) – Brewer et al.:

Examiner rejects Claims 1-4 under 35 U.S.C. 103(a) as being unpatentable over Applicants' admitted prior art in view of Brewer et al. (U.S. Patent No. 6,226,269).

Specifically, Examiner states that, within Applicants' admitted prior art, an apparatus comprising the elements of a frame de-encapsulation component configured for producing data frames compatible with said receiver from SONET frames input thereto, and outputting said receiver-compatible data frames and an idle frame signal generator configured for generating idle frame signals is taught.

Examiner further states that, although it is not taught in Applicants' admitted prior art, an apparatus comprising the elements of a Start of Frame (SOF) indicator detector configured for detecting a Start of Frame indicator in each said receiver-compatible data frame output from said frame de-encapsulation component and determining whether said Start of Frame indicator is valid or corrupted, wherein said detector produces an output signal indicative of said determination and a multiplexer configured for selecting for output to said receiver one of a first and a second signal input thereto on the basis of said output signal produced by said Start of Frame (SOF) indicator detector wherein said first input signal is a current said receiver-compatible data frame and said second input signal is said idle frame signal, said first input signal being selected when said output signal produced by said Start of Frame (SOF) indicator detector indicates that said Start of Frame indicator is valid and said second input signal being selected when said output signal produced by said Start of Frame (SOF) indicator detector indicates that said Start of Frame indicator is corrupted would have been obvious to one of ordinary skill in the art, at the time the invention was made, to incorporate the teachings as taught by Brewer et al. in the Applicants' invention.

Claim 1 has been amended to recite:

An apparatus for detecting and suppressing corrupted data frames transported from a SONET network to a receiver, said apparatus comprising:

a buffer-to-buffer credit counting means to control the flow of data frames thereto,

wherein said buffer-to-buffer credit counting means comprises:

(a) a frame de-encapsulation component configured for producing data frames compatible with said receiver from SONET frames input thereto, and outputting said receiver-compatible data frames;

(b) an idle frame signal generator configured for generating idle frame signals;

(c) a Start of Frame (SOF) indicator detector configured for detecting a Start of Frame indicator in each said receiver-compatible data frame output from said frame de-encapsulation component and determining whether said Start of Frame indicator is valid or corrupted, wherein said detector produces an output signal indicative of said determination; and

(d) a multiplexer configured for selecting for output to said receiver one of a first and a second signal input thereto on the basis of said output signal produced by said Start of Frame (SOF) indicator detector wherein said first input signal is a current said receiver-compatible data frame and said second input signal is said idle frame signal, said first input signal being selected when said output signal produced by said Start of Frame (SOF) indicator detector indicates that said Start of Frame indicator is valid and said second input signal being selected when said output signal produced by said Start of Frame (SOF) indicator detector indicates that said Start of Frame indicator is corrupted.

Claim 3 has been amended to recite:

A method for detecting and suppressing corrupted data frames transported from a SONET network to a receiver, said method comprising:

(a) receiving SONET frames from said SONET network and producing data frames compatible with said receiving from said received SONET frames;

(b) detecting a Start of Frame indicator in each said receiver-compatible data frame and determining whether said Start of Frame indicator is valid or corrupted; and

(c) selecting for output to said receiver a current said receiver-compatible data frame when said Start of Frame indicator is valid and

selecting for output to said receiver said idle frame signal when said Start of Frame indicator is corrupted;

wherein said method utilizes a buffer-to-buffer credit counting means to control the flow of data frames thereto.

These amendments are fully supported in the Specification, Drawings, and Claims of the Application and no new matter has been added.

Brewer et al. teach an apparatus and method for replacing invalid data and invalid control signals in a loop network to prevent errors from propagating throughout the loop (Col. 3, lines 17-20). A hub port in a loop network detects and replaces invalid data and invalid control signals in the datastream of the loop. The hub port detects invalid data or invalid control signals or primitives received from an attached node port and substitutes buffer data or valid primitives. (Col. 3, lines 24-32).

Brewer et al., however, do not teach a buffer-to-buffer credit counting means or the use of a SOF frame indicator to manage the buffer-to-buffer credit count. Applicants of the present invention, however, state that ***since fibre channel uses the SOF frame indicator to manage the buffer-to-buffer credit count, verifying its integrity prior to forwarding it to the client receiver ensures that the buffer-to-buffer credit count integrity is maintained while avoiding the introduction of latency.*** Furthermore, Applicants state that ***it is the maintenance of the buffer-to-buffer count integrity to which the invention is directed.***

Brewer et al. simply teach a line-level protection facility which is known to Applicants, and disclosed in the Application as filed. It is the problems inherent with these protection schemes that the present invention overcomes. Transmission of corrupted data causes the buffer-to-buffer count between the SOF output and the SOF indicator. This introduces latency into the network, the very problem that Applicants attempt to overcome.

The present invention utilizes a SOF detector which determines whether or not the SOF indicator of the current frame is corrupted. If the SOF detector determines that the

SOF indicator is valid, the SOF output signal causes the multiplexer to transmit the data to the FC client receiver. ***If the SOF detector determines that the SOF indicator is corrupted, the remainder of the frame is ignored and transmission of that corrupted frame is suppressed. By eliminating transmission of the corrupted frames, Applicants are able to maintain the integrity of the buffer counts, and avoid the latency that is introduced to the network by line-level protections such as the one taught by Brewer et al.***

Therefore, Applicants submit that the rejection of Claims 1-4 under 35 U.S.C. 103(a) as being unpatentable over Applicants' admitted prior art in view of Brewer et al. has now been overcome and respectfully request that this rejection be withdrawn.

Rejection of Claims 1-4 Under 35 U.S.C. 112, Second Paragraph:

Claims 1-4 stand rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which Applicants regard as the invention.

Specifically, Examiner states that evidence that Claims 1-4 fail to correspond in scope with that which Applicants regard as the invention can be found in the reply dated 10/19/2005. In this reply, Applicants stated "buffer-to-buffer credit" as part of Applicants' inventive concept and this statement indicates that the invention is different from what is defined in the claims because "buffer-to-buffer credit" is only mentioned in the preamble and not in the body of the claims.

As amended, the preambles of Claims 1 and 3 do not contain the language "buffer-to-buffer credit." Furthermore, "a buffer-to-buffer credit counting means" is disclosed in the body of amended Claims 1 and 3. These amendments are fully supported in the Specification. Additionally, the "buffer-to-buffer credit counting means" is, in fact, part of Applicants' inventive concept. Applicants specifically state in the Specification "that ***it is the maintenance of the buffer-to-buffer count integrity to which the invention is directed*** . . ." (Page 5).

Therefore, Applicants submit that the rejection of Claims 1-4 under 35 U.S.C. 112, second paragraph, has now been overcome and respectfully request that this rejection be withdrawn.

CONCLUSION

Applicants would like to thank Examiner for the attention and consideration accorded the present Application. Should Examiner determine that any further action is necessary to place the Application in condition for allowance, Examiner is encouraged to contact undersigned Counsel at the telephone number, facsimile number, address, or email address provided below. It is not believed that any fees for additional claims, extensions of time, or the like are required beyond those that may otherwise be indicated in the documents accompanying this paper. However, if such additional fees are required, Examiner is encouraged to notify undersigned Counsel at Examiner's earliest convenience.

Respectfully submitted,

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